

## Abstract

A device is provided for operating a gas sensor (10) that includes both at least one pump cell (13) and a measuring cell (19). A constant current source ( $U_+$ ,  $S_1$ ,  $U_-$ ,  $S_2$ ,  $R_i$ ) is provided that makes available a pump current ( $I_p$ ) which acts upon an outer electrode (11) of the pump cell (13). The constant current source ( $U_+$ ,  $S_1$ ,  $U_-$ ,  $S_2$ ,  $R_i$ ) provides at least two different amounts ( $I_+$ ,  $I_-$ ) of the pump current ( $I_p$ ) and/or allows for an alternating operation having ON phases (TD) and OFF phases (TA), the duration of the ON phases (TD)/OFF phases (TA) being specifiable. The device can be largely implemented in digital circuitry and adapted to different requirements.

15 (Fig. 2)